Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original)   A method for managing a safety instrumented function including a plurality of instrumented function components, the method comprising:

obtaining, from an asset management application, operating information about at least one of the plurality of instrumented function components;

determining a probability of failure on demand for the safety instrumented function based at least in part on the operating information;

comparing the probability of failure on demand with a designed probability of failure on demand for the safety instrumented function to establish a variance; and

managing the plurality of instrumented function components based on the variance.

2. (original)   The method of claim 1 wherein the probability of failure on demand is an average probability of failure on demand.

3. (original)   The method of claim 1 wherein the probability of failure on demand is an average probability of failure on demand.

4. (original)   The method of claim 1 wherein the obtaining operating information includes obtaining an indication that the at least one of the plurality of instrumented function components has failed.

5. (original)   The method of claim 4 including:

setting a probability of failure on demand for the at least one of the plurality of instrumented function components to a predefined value;

wherein the determining includes calculating the probability of failure on demand for the safety instrumented function as a function of the probability of failure on demand for the at least one of the plurality of instrumented function components.

6. (original)   The method of claim 1 wherein the obtaining further includes:

obtaining operating information about each of the plurality of instrumented function components;

wherein the determining includes calculating probability of failure on demand for each of the plurality of instrumented function components as a function of corresponding operating information received for each of the plurality of instrumented function components, thereby generating a plurality of probability of failure on demand values; and

wherein the probability of failure on demand for the safety instrumented function is determined as a function of the plurality of probability of failure on demand values.

7. (original)   The method of claim 1 wherein the obtaining includes obtaining test interval information about at least a portion of the plurality of instrumented function components.

8. (original)   The method of claim 1 wherein the managing comprises reducing a test interval between tests of another of the plurality of instrumented function components in response to the variance exceeding a maximum variance.

9. (original)   A system for managing a safety instrumented function including a plurality of instrumented function components comprising:

an asset management application configured to maintain status information relating to the plurality of instrumented function components; and

an online safety integrity level application in communication with the asset management application wherein the online safety integrity level application is

configured to receive the status information and calculate a probability of failure on demand for the safety instrumented function based at least in part on the status information.

10. (original) The system of claim 9 wherein the status information includes an indication that at least one of the plurality of instrumented function components has failed.

11. (original) The system of claim 9 wherein the status information includes an indication that at least one of the plurality of instrumented function components has been replaced, and wherein the online safety integrity level application is configured to reset a time since a last test for the at least one of the plurality of instrumented function components in response to the indication.

12. (original) The system of claim 9 wherein the online safety integrity level application is configured to receive test information about each of the plurality of instrumented function components and calculate the probability of failure on demand for the safety instrumented function based at least in part on the status information and the test information.

13. (original) The system of claim 12 wherein the test information includes an indication that at least one of the plurality of instrumented function components has failed, and wherein the online safety integrity level application is configured to send the indication to the asset management application.

14. (original) The system of claim 9 wherein the probability of failure on demand is an instantaneous probability of failure on demand.

15. (original) The system of claim 9 wherein the probability of failure on demand is an average probability of failure on demand.

16. (withdrawn)   A method for managing a plurality of instrumented function components, the method comprising:

receiving, from an online safety availability application, operating information about the plurality of instrumented function components;

updating, within an asset management database, status information for the plurality of instrumented function components based upon the operating information; and

managing the plurality of instrumented function components based on the status information.

17. (withdrawn)   The method of claim 16 including:

sending status information to the online safety availability application; and

calculating, via the online safety availability application, a probability of failure on demand for a safety instrumented function, and wherein the safety instrumented function comprises at least a portion of the plurality of instrumented function components.

18. (withdrawn)   The method of claim 16 wherein the operating information about the plurality of instrumented function components includes an indication that at least one of the plurality of instrumented function components has failed.

19. (withdrawn)   The method of claim 18 wherein the managing includes initiating procurement of at least one new instrumented function component to replace the at least one of the plurality of instrumented function components that has failed.

20. (withdrawn)   A system for managing a plurality of instrumented function components, the system comprising:

means for receiving, from an online safety availability application, operating information about the plurality of instrumented function components;

means for updating, within an asset management database, status information for the plurality of instrumented function components based upon the operating information; and

means for managing the plurality of instrumented function components based on the status information.

21. (withdrawn)   The system of claim 20 including means for sending status information to the online safety availability application wherein the online safety availability application is configured to calculate a probability of failure on demand for a safety instrumented function, and wherein the safety instrumented function comprises at least a portion of the plurality of instrumented function components.

22. (withdrawn)   The system of claim 20 wherein the operating information about the plurality of instrumented function components includes an indication that at least one of the plurality of instrumented function components has failed.

23. (withdrawn)   The system of claim 21 wherein the means for managing includes means for initiating procurement of at least one new instrumented function component to replace the at least one of the plurality of instrumented function components that has failed.

24. (cancelled)

25. (cancelled)

26. (currently amended) A processor readable medium including processor-executable code to generate safety availability information for an instrumented function including a plurality of instrumented function components, the code comprising instructions for:

obtaining, from an asset management application, operating information about at least one of the plurality of instrumented function components;

determining a probability of failure on demand for the instrumented function based at least in part on the operating information; and

generating the safety availability information based on the probability of failure on demand; ~~The computer executable code of claim 24~~

wherein the operating information includes an indication that at least one of the plurality of instrumented function components has been replaced, and wherein the computer executable code includes instructions for resetting a time since a last test for the at least one of the plurality of instrumented function components in response to the indication.

27. (currently amended) A processor readable medium including processor-executable code to generate safety availability information for an instrumented function including a plurality of instrumented function components, the code comprising instructions for:

obtaining, from an asset management application, operating information about at least one of the plurality of instrumented function components;

determining a probability of failure on demand for the instrumented function based at least in part on the operating information; and

generating the safety availability information based on the probability of failure on demand; ~~The computer executable code of claim 24~~

wherein the determining includes:

determining a probability of failure on demand for each of the a plurality of instrumented function components thereby generating a plurality of probability on demand values; and

calculating the probability of failure on demand for the instrumented function based on the plurality of probability on demand values.

28. (currently amended) The computer-executable code of ~~claim 24~~ claim 27 wherein the probability of failure on demand is an instantaneous probability of failure on demand.

29. (currently amended) A processor readable medium including processor-executable code to generate safety availability information for an instrumented function including a plurality of instrumented function components, the code comprising instructions for:

obtaining, from an asset management application, operating information about at least one of the plurality of instrumented function components;

determining a probability of failure on demand for the instrumented function based at least in part on the operating information; and

generating the safety availability information based on the probability of failure on demand; ~~The computer-executable code of claim 24~~

wherein the probability of failure on demand is an average probability of failure on demand.

30. (currently amended) A processor readable medium including processor-executable code to generate safety availability information for an instrumented function including a plurality of instrumented function components, the code comprising instructions for:

obtaining, from an asset management application, operating information about at least one of the plurality of instrumented function components;

determining a probability of failure on demand for the instrumented function based at least in part on the operating information; and

generating the safety availability information based on the probability of failure on demand ~~The computer-executable code of claim 24~~

wherein the obtaining operating information comprises obtaining a test completion time for the at least one of the plurality of instrumented function components.

31. (currently amended) The computer-executable code of ~~claim 24~~ claim 27 further including instructions for providing an alarm based on the safety availability information.

32. (currently amended) The computer-executable code of ~~claim 24~~ claim 27 further including instructions for providing a display of the safety availability information.

33. (currently amended) The computer-executable code of ~~claim 24~~ claim 27 wherein the safety availability information is selected from the group consisting of: a probability of failure on demand, a safety integrity level and a risk reduction factor.

34. (currently amended) The computer-executable code of ~~claim 24~~ claim 27 wherein the obtaining includes obtaining, via a network, operating information about the at least one of the plurality of instrumented function components from a programmable device coupled to the at least one of the plurality of instrumented function components.

35. (New) The computer-executable code of claim 27 wherein the operating information includes an indication that the at least one of a plurality of instrumented function components has failed.

36. (New) The computer-executable code of claim 27 wherein the wherein the probability of failure on demand is an average probability of failure on demand.